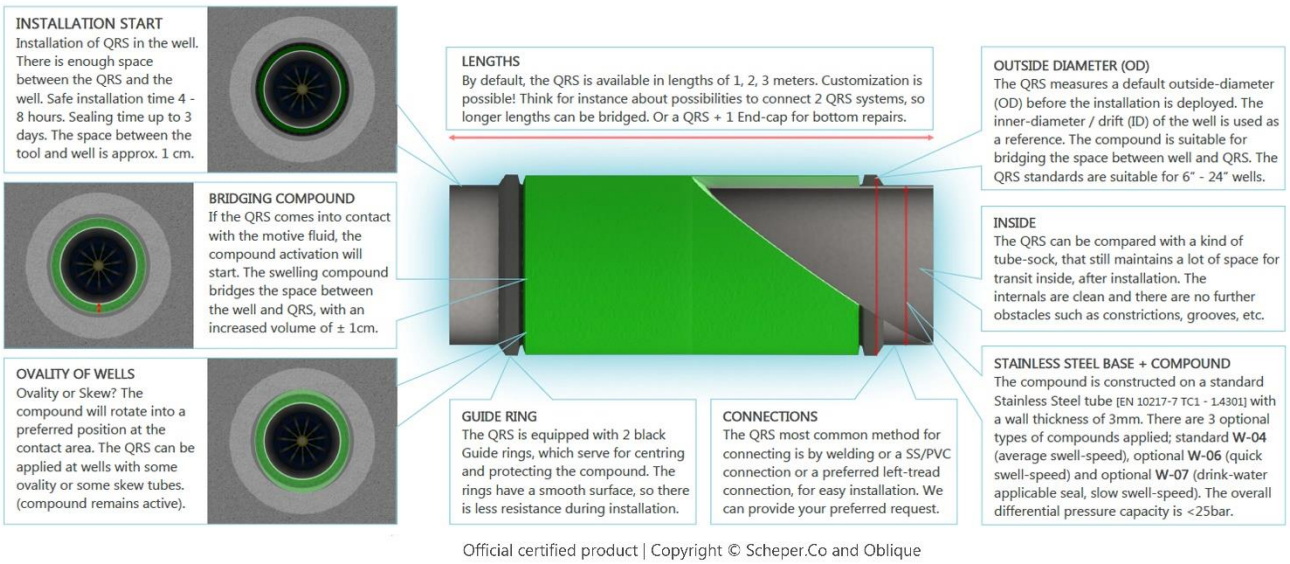
Summary

Together with HP Wellscreen, we distribute the QRS in the Middle East and Africa. Recently we repaired a fresh-water well, at a large innovative dairy farm with tens-of-thousands cows in the Middle East. The QRS is a serious option for the repair of; leaks in wells, and modifications/repairs of wells. We have managed to repair a leaking downhole filter. By successfully running the QRS into the well, whereby the defective filter screens within 1 industrial fresh-water well have been blinded.

Samen met HP Wellscreen distribueren wij de QRS in het Midden-Oosten en Afrika. Op een groot innovatief melkveebedrijf met tienduizenden koeien in het Midden-Oosten, hebben we recent een zoetwaterput gerepareerd. De QRS is een serieuze optie voor de reparatie van lekken in putten, en modificaties/reparaties van putten. Wij hebben de reparatie van een lekkend downhole filter voor elkaar gekregen.
Door de QRS met succes in de put te laten lopen, waarbij de defecte putschermen binnen 1 industriële zoetwaterbron zijn afgeblind.

Background

The QRS is suitable for various repairs, so maintenance actions can be carried out ad-hoc and preventive. This solution allows the management of the wells' life cycle, in a sustainable, smart and cost-effective manner.
Within the actual situation, the filter screen of the water well was failing by causing sand ingress at a debt of -250m from the surface. The formation composition knows a combination of sandstone, limestone and shale. The arising temperature is 40ºC. The 7-year-old well is constructed with a 16" Casing, and a 9 5/8" stainless steel filter screen (308) over a filter length of 100 meters. The well has a regular production capacity of 200m³/hr. The max. differential pressure on the defective spot location is 1500 psi.



Illustration; QRS general typicals

Solution

It was not planned and budgeted to renew the 7-year-old stainless steel well, which is a pretty short lifespan. In this case, the customer was searching for a compatible solution. Within this search he compared two solutions;
1) QRS, and 2) Pre-pack screen.

The pre-pack screen had a very high cost, and there are risks for installation. With the QRS the job could be done at a much lower cost and it was also a pretty straightforward quick fix. The only real constraint was identifying the failed area within the 100m well screen. We provided 2 QRS systems from stainless steel 304 with a core length of 4 meters. The 4-meter-long assembly has a running time of max. 4 days (we can provide a QRS with a run time of 12hr).

The installation cap has an opposite thread (right picture). After the release of the QRS (approx. +3 days), the 4-meter assembly is left behind, by turning the string in its regular direction and subsequently retrieving the string.

After installation, the QRS blinded the failed filter of the original stainless steel screen. The customer is very satisfied with the solution we also prevented a too-narrow passage for the rest of the filter, so there isn't any decline in production capacity or necessary services in a later stage. Based on the experience there was not even a recommendation for improvement. Overall we have provided a very straightforward solution. The lifetime of the well is extended by a small investment, without large modifications and changes. We hope this customer can use his well and feed his cows for the next decades without issues.